

SUPPLEMENT TO “CONSERVATION AREA MANAGEMENT GUIDELINES”

CONSERVATION AREA ANNUAL PROTECTION AND REPRESENTATION PLANNING ASSESSMENT

Over time, the State of Michigan has used myriad methods to recognize, identify, protect and manage natural resources for special and/or unique biological and social elements and values. The result of these efforts is a broad spectrum of designated, dedicated, recognized, or mandated conservation areas and protection direction. This set of designations is influenced by changes in science, research and knowledge, along with citizens' changing attitudes and priorities.

An initial step has been to categorize conservation elements in a single system without losing the original intents and protections. Next, the Biodiversity Conservation Planning process was developed for adapting and refining the system.

The Annual Protection and Representation Planning Assessment is a tool to regularly review and assess protection efforts in the context of biological and social changes.

Ecological Reference Area Protection and Biodiversity Management Assessment

The Summary from December 16, 2004 Forest Stewardship Council (FSC) and Sustainable Forest Initiative (SFI) Scoping Reports states:

“Conformance to FSC Criterion 6.4 requiring a system of protected, representative, reference areas (RA) is difficult to ascertain because the old growth/biodiversity initiative is still not completed.”

FSC PRINCIPLE #6: ENVIRONMENTAL IMPACT:

“Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.”

FSC Criterion 6.4:

“Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.”

With the adoption of the new Biodiversity Conservation Planning Process (adopted in June 2005, a continuation of the old growth/biodiversity stewardship process) several biodiversity assessments are underway or planned for 2006 (See Appendix A Biodiversity Conservation Planning Proposal and Appendix F Biodiversity Assessments). The Department has developed several GIS layers (maps) including High Conservation Value Areas (HCVAs) and Ecological Reference Areas (ERAs) for use at varying scales of planning, including the Forest Management Unit, Ecoregional and State levels. These GIS layers and map products will be updated annually.

Additional ongoing analyses are underway to further comply with FSC 6.4 Criterion and address the gap identified in the 2004 Scoping Audit (as described above) pertaining to the documentation of ecosystem representation and protection. This type of analysis will evolve over time and will be performed at least once a year.

Natural Community Representation: Known high quality natural communities identified in the Michigan Natural Features Inventory (MNFI) database will be assessed for natural community representation on DNR State Forest land and other ownerships. The MNFI, as of August 2005, recognizes 74 natural communities. This analysis deals with ecosystem representation and will help answer:

1. How many of each natural community are represented on DNR State Forest land?
2. How many of each natural community are represented across all ownerships?
3. What is the size (acres), rarity (global (G)/state (S) rank) and quality (EO Rank) of each natural community?

The analyses will be both spatial and in tabular formats. The results will assist in guiding future MNFI natural community survey efforts by showing where there are GAPS in surveys and GAPS in ecosystem representation. The MNFI ecologists have been contracted starting in October 2005 to begin a natural community survey on State Forest lands of previously identified high quality natural communities to confirm their values, quality, viability and management needs. The field data collected in subsequent years will be incorporated in future summaries and analyses.

Protection Status: The second analysis assesses the protection and management for biodiversity values of high quality natural communities on DNR State Forest land and other ownerships. The DNR recognizes Special Conservation Areas with numerous social, ecological, and recreational values and various management objectives (See Table 1 below). Some designations confer more security or protection from natural land conversion than others.

Four categories of biodiversity management status categories have been widely applied in the United States using the site based attributes by Michael J. Scott et al, 1993 (Groves, C. R. 2003, pg.116 – 117.):

- “Permanence of protection from conversion of natural cover to unnatural cover (cultivated lands, urban areas, areas dominated by exotic species.) Retaining natural cover is a key ingredient to successfully conserving biodiversity.
- The relative amount of the land unit managed for natural cover. At least 95% of the land cover within a conservation area must be maintained in a natural condition for it to be considered being in a “natural state”.
- Inclusiveness of management (i.e., management aimed at multiple targets and not just a single species.) In general, land managed to retain all of its conservation targets or native elements of biodiversity will maintain biodiversity better than land managed for a single feature.
- Type of management (e.g., suppressing or allowing natural disturbance regimes) and the degree to which that management is mandated or mimics natural disturbance regimes that are suppressed or not adequately functioning. The degree to which an area can be successfully managed for natural disturbance regimes will depend on the design of that area.”

In Michigan, the DNR Wildlife Division cooperated with the US Fish and Wildlife Service to produce a GAP analysis for birds, mammals and reptiles and amphibians (Donovan et al, 2004). The DNR Forest Certification Implementation Team applied a modified approach using the four recognized categories and adding sublevels to reflect slightly varying degrees of protection within Category 1 (See Table 1 – Categories 1A, 1B, and 1C). The biodiversity management categories (Codes 1 A, B, C, 2, 3, 4) are attributed in a GIS “Biodiversity Management” project and overlain with the known high quality natural communities. This analysis will allow the DNR to assess the biodiversity management status and permanence of protection for the known high quality natural communities on State Forest and other lands. This analysis with the Irreplaceability Analysis discussed in Appendix F will allow the DNR to prioritize protection and management goals for its high quality natural communities. The DNR will partner with other agencies and organizations to more effectively ensure a statewide network of protected and representative natural communities. The Biodiversity Management/Protection analysis may also be used to inform the management and protection status of other biodiversity values such as endangered and threatened species sites in the future.

Table 1: Biodiversity management categories and examples used by the Michigan Department of Natural Resources modified after Scott, M. J. et al 1993, Groves, C. R. 2003 and Donovan, M. L. et al, 2004.

Biodiversity Management Status Code and Description	Level of Protection	Area Designation Examples	Managing Agency
1A: Dedicated Permanent Protection & Required Biodiversity Management: A dedicated area, governed by legislative mandate, having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, intensity, and legacy) are allowed to proceed without interference or are mimicked through management.	1A HIGHEST	State of MI	State of MI
		Wilderness, Wild, and Natural Areas legally dedicated under Public Act 451 Part 355.	DNR
		Federal	
		Research Natural Areas	USFS, USFWS, NPS
		Wilderness Areas	USFS, USFWS, NPS
		Wild & Scenic Rivers	USFS, USFWS, NPS
		Some or Portions of National Wildlife Refuges	USFWS
1B: Proposed Permanent Protection with Restrictions & Required Biodiversity Management: An area proposed to be governed by legislative mandate or given special consideration for restrictions by a governing body, <u>with the intent of</u> having permanent protection in the near future from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, intensity, and legacy) are allowed to proceed without interference or are mimicked through management.	1B HIGHER	State of MI	State of MI
		Wilderness, Wild, and Natural Areas proposed for dedication under Public Act 451, Part 351.	DNR
<i>Comment: New areas could be dedicated by the NRC, a decision would have to be made to re-initiate this option.</i>		Natural Areas dedicated by the Michigan DNR Natural Resources Commission prior to 1972	DNR

Biodiversity Management Status Code and Description	Level of Protection	Area Designation Examples	Managing Agency
1C: Administrative Permanent Protection & Required Biodiversity Management: An area having permanent protection through administrative recognition from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, intensity, and legacy) are allowed to proceed without interference or are mimicked through management.	1C HIGH	State of MI:	
		Natural Areas designated via the DNR Compartment Review Process	DNR
		Natural Areas designated via DNR Management Plans	DNR
		Natural Areas designated via DNR/TNC Registry Sites	DNR
		Federal:	DNR
		Natural Areas designated via cooperative agreements with the National Park Service as National Natural Landmarks	DNR, other public agencies
		Private Preserves	Land Trusts
			TNC, MNA, MAS
		Ecological Reference Areas - recognized by work instruction.	DNR
2: Conversion Protection: Some Required Biodiversity Management An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive uses or management practices that degrade the quality of existing natural communities, including suppression of natural disturbance.	2 MEDIUM	State of MI	
		Natural Rivers dedicated under Part 305, Public Act 451 of 1994	DNR and other land owners including private

Biodiversity Management Status Code and Description	Level of Protection	Area Designation Examples	Managing Agency
		State Parks managed primarily for their Natural Resource values.	DNR
		Federal:	DNR
		National Parks National Lakeshores	NPS
		Local:	
		County Park Preserves	Local Governments
		Municipal Park Preserve	Local Governments
		Private:	
		Other Private Preserves	
		Land Trusts holding conservation easements and/or deed restrictions	

Biodiversity Management Status Code and Description	Level of Protection	Area Designation Examples	Managing Agency
3: Conversion Protection and Some Extractive Use Allowed: An area having permanent protection from conversion of natural land cover for the majority of the area, but subject to extractive uses of either a broad, low-intensity type (e.g. logging) or localized intense (e.g. mining, extensive recreation). It also confers protection to federally listed endangered and threatened species throughout the area.	3 LOW	State of MI	
		State Forests	DNR
		State Game Areas	DNR
		State Parks	DNR
		Federal:	
		National Forests	USFS
		National Wildlife Refuges	USFWS
4: Unprotected/Extractive Use Allowed: There are no known public or private institutional mandates or legally recognized easements or deed restrictions held by the managing entity to prevent conversion of natural land cover types to anthropogenic land cover types. Management of the area generally allows conversion to unnatural land cover throughout.	4 NONE	All other land uses...agriculture, urban, etc.	Various